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Atty. Docket No.: 238/087 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Nigel R. Beeley, et al.

Serial No.: 09/554,531

Filed: August 8, 2000

Title: NOVEL EXENDIN AGONIST
COMPOUNDS

Group Art Unit: 1614

Examiner: Delacroix, Muirhei, C.

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Assistant Commissioner for Patents
P.O. Box 2327
Arlington, VA 22202

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The Sequence Listing is provided in ASCII text on the accompanying diskette. As required under 37 CFR §1.821(f), the Sequence Listing information recorded in computer readable form is identical to the written Sequence Listing paper copy.

Respectfully submitted,

AMYLIN PHARMACEUTICALS, INC

Molly A. Holman, Ph.D.

Registration No.: 40,022

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(37 C.F.R. §1.8a)

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Molly A. Holman

Name of Person Mailing Paper

Molly A. Holman

Signature of Person Mailing Paper



1

SEQUENCE LISTING

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<130> 238/087 US

<140> 09/554,531

<141> 2000-08-08

<140> PCT/US98/24273

<141> 1998-11-13

<150> US 60/066,029

<151> 1997-11-14

<160> 110

<170> FastSEQ for Windows Version 3.0
Microsoft Word Ver. 98

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<212> PRT

<213> Heloderma horridum

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<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

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His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
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 <223> amidated Ser (Serinamide)

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His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
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Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
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			35												

<210> 3
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<220>
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 <222> (30)...(30)
 <223> amidated Arg (Argininamide)

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His	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5				10						15	
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg		
			20					25					30		

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<220>
 <221> VARIANT
 <222> (1)...(7)
 <223> Xaa in position 1 is His, Arg, Tyr, Ala, Norval, Val or Norleu; Xaa in position 2 is Ser, Gly, Ala or Thr; Xaa in position 3 is Ala, Asp or Glu; Xaa in position 4 is Ala, Norval, Val, Norleu or Gly; Xaa in position 5 is Ala or Thr; Xaa in position 6 is Phe, Tyr or naphthylalanine; Xaa in

position 7 is Thr or Ser;

<220>

<221> VARIANT

<222> (8)...(13)

<223> Xaa in position 8 is Ala, Ser or Thr; Xaa in position 9 is Ala, Norval, Val, Norleu, Asp or Glu; Xaa in position 10 is Ala, Leu, Ile, Val, pentylglycine or Met; Xaa in position 11 is Ala or Ser; Xaa in position 12 is Ala or Lys; Xaa in position 13 is Ala or Gln;

<220>

<221> VARIANT

<222> (14)...(20)

<223> Xaa in position 14 is Ala, Leu, Ile, pentylglycine, Val or Met; Xaa in position 15 is Ala or Glu; Xaa in position 16 is Ala or Glu; Xaa in position 17 is Ala or Glu; Xaa in position 19 is Ala or Val; Xaa in position 20 is Ala or Arg;

<220>

<221> VARIANT

<222> (21)...(24)

<223> Xaa in position 21 is Ala or Leu; Xaa in position 22 is Phe, Tyr or naphthylalanine; Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met; Xaa in position 24 is Ala, Glu or Asp;

<220>

<221> VARIANT

<222> (25)...(28)

<223> Xaa in position 25 is Ala, Trp, Phe, Tyr or naphthylalanine; Xaa in position 26 is Ala or Leu; Xaa in position 27 is Ala or Lys; Xaa in position 28 is Ala or Asn;

<220>

<221> VARIANT

<222> (29)...(29)

<223> Xaa in position 29 is -OH; -NH₂; Gly-Z₂; Gly Gly-Z₂; Gly Gly Xaa₃₁-Z₂; Gly Gly Xaa₃₁ Ser-Z₂; Gly Gly Xaa₃₁ Ser Ser-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂;

<220>

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<222> (29)...(29)

<223> Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈ Ser-Z₂

<220>

<221> VARIANT

<222> (29)...(29)

<223> where Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine, N-alkylpentylglycine or N-alkylalanine; and Z₂ is -OH or -NH₂;

<220>

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 <222> (3)...(28)
 <223> provided that no more than three of Xaa in positions 3, 5, 6,
 8, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 24, 25, 26,
 27 and 28 are Ala.

<400> 4

Xaa	Xaa	Xaa	Gly	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5				10					15	
Xaa	Ala	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
			20					25						

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 <223> amidated Asn (Asparaginamide)

<400> 5

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn				
			20						25						

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 compound

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 <223> amidated Asn (Asparaginamide)

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His	Gly	Ala	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

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 <223> amidated Asn (Asparaginamide)

<400> 7

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

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 <223> amidated Asn (Asparaginamide)

<400> 8

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

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Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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His	Gly	Ala	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 12
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 <223> amidated Asn (Asparaginamide)

<400> 12

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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Ala	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20				25				

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Ala	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20				25				

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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 <223> amidated Asn (Asparaginamide)

<400> 17

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

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<400> 18

Ala	Gly	Asp	Gly	Ala	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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<400> 19

Ala	Gly	Asp	Gly	Ala	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

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<223> Xaa in position 6 stands for naphthylalanine.

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<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

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Ala	Gly	Asp	Gly	Thr	Xaa	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
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 <223> Xaa in position 6 stands for naphthylalanine.

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Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

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Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
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 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
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Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
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Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu

14

1	5	10	15								
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Glu	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn				
			20					25							

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Glu	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn				
			20					25							

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Ala	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Ala	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

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 <223> Xaa in position 10 stands for pentylglycine.

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Xaa	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

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 <223> Xaa in position 10 stands for pentylglycine.

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Xaa	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ala	Lys	Gln	Met	Glu	Glu
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Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20				25				

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Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ala	Lys	Gln	Leu	Glu	Glu
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Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20				25				

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 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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 <223> amidated Asn (Asparaginamide)

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 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

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 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

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 <223> amidated Asn (Asparaginamide)

<400> 39

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Ala	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 40
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 40

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Ala	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 41
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 41

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Ala	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 42
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 14 stands for pentylglycine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 42

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Xaa	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 43
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 14 stands for pentylglycine.

<220>
 <221> AMIDATION

<222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 43

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Xaa	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn				
			20					25							

<210> 44
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 44

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Ala	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn				
			20					25							

<210> 45
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 45

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Ala	Glu
1				5					10					15	

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 46
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 46

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ala
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 47
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 47

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 48
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 48

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Ala	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 49
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 49

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Ala	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 50
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION

<222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 50

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Ala	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn				
			20					25							

<210> 51
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 51

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Ala	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn				
			20					25							

<210> 52
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 52

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu Ala Val Ala Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 53
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 53

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 54
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 54

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 55
 <211> 28

<212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 55

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Ala	Phe	Ile	Glu	Phe	Leu	Lys	Asn				
			20						25						

<210> 56
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 22 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 56

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Xaa	Ile	Glu	Trp	Leu	Lys	Asn				
			20						25						

<210> 57
 <211> 28

<212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 22 stands for naphthylalanine.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 57

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Xaa	Ile	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 58
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 58

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Val	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 59
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 59

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Val	Glu	Phe	Leu	Lys	Asn
			20					25			

<210> 60

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 23 stands for tert-butylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 60

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Xaa	Glu	Trp	Leu	Lys	Asn
			20					25			

<210> 61

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 23 stands for tert-butylglycine.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 61

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Xaa	Glu	Phe	Leu	Lys	Asn
			20						25		

<210> 62

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 62

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Asp	Trp	Leu	Lys	Asn
			20						25		

<210> 63

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 63

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn
 20 25

<210> 64

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist
 compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 64

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn
 20 25

<210> 65

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist
 compound

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 65

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn
 20 25

<210> 66
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 66

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Ala	Lys	Asn				
			20					25							

<210> 67
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 67

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Ala	Lys	Asn				
			20					25							

<210> 68
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 68

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Ala	Asn
			20				25				

<210> 69
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Asn (Asparaginamide)

<400> 69

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Ala	Asn
			20				25				

<210> 70
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist

compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Ala (Alaninamide)

<400> 70

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Ala
			20				25				

<210> 71
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated Ala (Alaninamide)

<400> 71

Ala	Gly	Asp	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Ala
			20				25				

<210> 72
 <211> 38
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated Pro (Prolinamide)

<400> 72

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15
 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30
 Ser Gly Ala Pro Pro Pro
 35

<210> 73
 <211> 38
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (38)...(38)
 <223> amidated amidated Pro (Prolinamide)

<400> 73

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15
 Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
 20 25 30
 Ser Gly Ala Pro Pro Pro
 35

<210> 74
 <211> 37
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> artificially synthesized sequence of novel exendin agonist
 compound

<220>
 <221> AMIDATION
 <222> (37)...(37)
 <223> amidated amidated Pro (Prolinamide)

<400> 74

35

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro
35

<210> 75
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (36)...(36)
<223> amidated amidated Pro (Prolinamide)

<400> 75

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro
35

<210> 76
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (36)...(36)
<223> amidated Pro (Prolinamide)

<400> 76

Ala Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu

36

1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala Pro
 35

<210> 77
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (35)...(35)
<223> amidated Ala (Alaninamide)

<400> 77

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala
 35

<210> 78
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (35)...(35)
<223> amidated Ala (Alaninamide)

<400> 78

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
 20 25 30

Ser Gly Ala
35

<210> 79
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (34)...(34)
<223> amidated Gly (Glycinamide)

<400> 79

His	Gly	Glu	Ala	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5				10						15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser Gly

<210> 80
<211> 33
<212> PRT
<213> Artificial Sequence

<220>
<223> artificially synthesized sequence of novel exendin agonist
compound

<220>
<221> AMIDATION
<222> (33)...(33)
<223> amidated Ser (Serinamide)

<400> 80

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5				10						15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser

<210> 81
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 81

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

<210> 82
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <221> AMIDATION
 <222> (32)...(32)
 <223> amidated Ser (Serinamide)

<400> 82

His	Gly	Ala	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

<210> 83
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (31)...(31)

<223> amidated Pro (Prolinamide)

<400> 83

His	Gly	Glu	Ala	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	
			20					25					30		

<210> 84

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (30)...(30)

<223> amidated Gly (Glycinamide)

<400> 84

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn	Gly	Gly		
			20					25					30		

<210> 85

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (29)...(29)

<223> amidated Gly (Glycinamide)

<400> 85

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5				10					15		

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Lys	Asn	Gly
			20				25					

<210> 86

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in positions 31, 36, 37 and 38 stands for thioproline.

<220>

<221> AMIDATION

<222> (38)...(38)

<223> amidated tPro (Thioprolinamide)

<400> 86

His	Gly	Ala	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5				10					15		

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Xaa	Ser
			20				25					30			

Ser	Gly	Ala	Xaa	Xaa	Xaa
			35		

<210> 87

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in positions 36, 37 and 38 stands for thioproline.

<220>

<221> AMIDATION

<222> (38)...(38)

<223> amidated tPro (Thioprolinamide)

<400> 87

His	Gly	Glu	Ala	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5				10						15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		
Ser	Gly	Ala	Xaa	Xaa	Xaa										
			35												

<210> 88

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in positions 31, 36 and 37 stands for N-methyl ala.

<220>

<221> AMIDATION

<222> (37)...(37)

<223> amidated N-methyl ala (N-methyl alaninamide)

<400> 88

His	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5				10						15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Xaa	Ser
			20					25					30		
Ser	Gly	Ala	Xaa	Xaa											
			35												

<210> 89

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in positions 31 and 36 stands for homoproline.

<220>

<221> AMIDATION

<222> (36)...(36)

<223> amidated hPro (Homoprolinamide)

<400> 89

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Xaa	Ser
			20					25					30		

Ser	Gly	Ala	Xaa
		35	

<210> 90

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (35)...(35)

<223> amidated Ala (Alaninamide)

<400> 90

His	Gly	Ala	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		

Ser	Gly	Ala
		35

<210> 91

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (30)...(30)

<223> amidated Gly (Glycinamide)

<400> 91

His	Gly	Asp	Ala	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly		
			20					25					30		

<210> 92

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 92

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Lys	Asn	Gly	Gly	Pro	Ser
			20					25					30		
Ser	Gly	Ala	Pro	Pro	Pro	Ser									
			35												

<210> 93

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<221> AMIDATION

<222> (39)...(39)

<223> amidated Ser (Serinamide)

<400> 93

SD-103814.1

straight chain or branched alkanoyl or cycloalkyl-alkanoyl;
Xaa in position 22 is Phe, Tyr or naphthylalanine;

<220>

<221> VARIANT

<222> (23)...(26)

<223> Xaa in position 23 is Ile, Val, Leu, pentylglycine, tert-butylglycine or Met; Xaa in position 24 is Ala, Glu or Asp; Xaa in position 25 is Ala, Trp, Phe, Tyr or naphthylalanine; Xaa in position 26 is Ala or Leu;

<220>

<221> VARIANT

<222> (27)...(27)

<223> Xaa in position 27 is Lys Asn, Asn Lys, Lys-NH^e-R Asn, Asn Lys-NH^e-R, Lys-NH^e-R Ala, Ala Lys-NH^e-R where R is Lys, Arg, C₁-C₁₀ straight chain or branched alkanoyl or cycloalkyl-alkanoyl;

<220>

<221> VARIANT

<222> (28)...(28)

<223> Xaa in position 28 is -OH; -NH₂; Gly-Z₂; Gly Gly-Z₂; Gly Gly Xaa₃₁-Z₂; Gly Gly Xaa₃₁ Ser-Z₂; Gly Gly Xaa₃₁ Ser Ser-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆-Z₂;

<220>

<221> VARIANT

<222> (28)...(28)

<223> Xaa in position 28 is Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇-Z₂; Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈-Z₂; or

<220>

<221> VARIANT

<222> (28)...(28)

<223> Xaa in position 28 is Gly Gly Xaa₃₁ Ser Ser Gly Ala Xaa₃₆ Xaa₃₇ Xaa₃₈ Xaa₃₉-Z₂;

<220>

<221> VARIANT

<222> (28)...(28)

<223> wherein Xaa₃₁, Xaa₃₆, Xaa₃₇ and Xaa₃₈ are independently selected from the group consisting of Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine, N-alkylpentylglycine and N-alkylalanine; and Z₂ is -OH or -NH₂;

<220>

<221> VARIANT

<222> (3)...(26)

<223> provided that no more than three of Xaa in positions 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 24, 25 and 26 are Ala

<220>

<221> VARIANT

<222> (3)...(26)

<223> and provided also that, if Xaa₁ is His, Arg, Tyr, or 4-imidazopropionyl then at least one of Xaa₃, Xaa₄ and Xaa₉ is Ala.

<400> 94

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5				10					15		
Xaa	Ala	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
				20				25							

<210> 95

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
Xaa in position 26 is Lys-NH⁶octanoyl.

<220>

<221> AMIDATION

<222> (27)...(27)

<223> amidated Asn (Asparaginamide)

<400> 95

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu	Glu
1				5				10					15		
Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Xaa	Asn					
			20					25							

<210> 96

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.

Xaa in position 26 is Lys-NH⁸octanoyl.

<220>
 <221> AMIDATION
 <222> (27)...(27)
 <223> amidated Asn (Asparaginamide)

<400> 96

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Leu	Glu	Glu	Glu
1				5					10					15	

Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Xaa	Asn
			20					25		

<210> 97
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 26 is Lys-NH⁸octanoyl.

<220>

<221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 97

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu	Glu
1				5					10					15	

Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Xaa	Asn	Gly	Gly
			20					25				

<210> 98
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 26 is Lys-NH^εoctanoyl.

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 98

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Leu	Glu	Glu	Glu
1				5				10					15		

Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Xaa	Asn	Gly	Gly
			20					25				

<210> 99
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 27 is Lys-NH^εoctanoyl.

<220>
 <221> AMIDATION
 <222> (27)...(27)
 <223> amidated NH^εoctanoyl (NH^εoctanoylamide)

<400> 99

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu	Glu
1				5				10					15		

Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Asn	Xaa
			20					25		

<210> 100
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 27 is Lys-NH^εoctanoyl.

<220>
 <221> AMIDATION
 <222> (27)...(27)
 <223> amidated NH^eoctanoyl (NH^eoctanoylamide)

<400> 100

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Leu	Glu	Glu	Glu
1				5				10					15		
Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Asn	Xaa					
			20					25							

<210> 101
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 27 is Lys-NH^eoctanoyl.

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 101

Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Ala	Leu	Ser	Lys	Gln	Met	Glu	Glu	Glu
1				5				10					15		
Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Asn	Xaa	Gly	Gly			
			20					25							

<210> 102
 <211> 29
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 1 is 4-imidazolylpropionyl-Gly.
 Xaa in position 27 is Lys-NH^eoctanoyl.

<220>
 <221> AMIDATION
 <222> (29)...(29)
 <223> amidated Gly (Glycinamide)

<400> 102

Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa Gly Gly
20 25

<210> 103

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 27 is Lys-NH^foctanoyl.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 103

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn
20 25

<210> 104

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> artificially synthesized sequence of novel exendin agonist compound

<220>

<223> Xaa in position 27 is Lys-NH^foctanoyl.

<220>

<221> AMIDATION

<222> (28)...(28)

<223> amidated Asn (Asparaginamide)

<400> 104

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn
 20 25

<210> 105
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 27 is Lys-NH⁸octanoyl.

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 105

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly
 20 25 30

<210> 106
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 27 is Lys-NH⁸octanoyl.

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 106

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly
 20 25 30

<210> 107
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 28 is Lys-NH⁶octanoyl.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated NH⁶octanoyl (NH⁶octanoylamide)

<400> 107

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Asn	Xaa
			20					25			

<210> 108
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 28 is Lys-NH⁶octanoyl.

<220>
 <221> AMIDATION
 <222> (28)...(28)
 <223> amidated NH⁶octanoyl (NH⁶octanoylamide)

<400> 108

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	

Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Asn	Xaa
			20					25			

<210> 109

<211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 28 is Lys-NH⁶octanoyl.

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 109

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Met	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Trp	Leu	Asn	Xaa	Gly	Gly		
			20					25					30		

<210> 110
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> artificially synthesized sequence of novel exendin agonist compound

<220>
 <223> Xaa in position 28 is Lys-NH⁶octanoyl.

<220>
 <221> AMIDATION
 <222> (30)...(30)
 <223> amidated Gly (Glycinamide)

<400> 110

Ala	Gly	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Leu	Ser	Lys	Gln	Leu	Glu	Glu
1				5					10					15	
Glu	Ala	Val	Arg	Leu	Phe	Ile	Glu	Phe	Leu	Asn	Xaa	Gly	Gly		
			20					25					30		

ATTACHMENT A

CONFIDENTIAL

**Addendum I To December 18, 2001 Company Boardroom Membership Agreement Between
Amylin Pharmaceuticals, Inc. and CCBN.com**

THIS ADDENDUM I, effective as of December 18, 2001, is by and between AMYLIN PHARMACEUTICALS, INC., a Delaware corporation ("Client"), with offices at 9373 Towne Centre Drive, Suite 250, San Diego, CA 92121, and CCBN.COM, a Delaware corporation ("CCBN.com"), with offices at 200 Portland Street, Boston, MA 02114.

Client and CCBN.com have entered into a Company Boardroom Membership Agreement dated as of December 18, 2001 (the "Membership Agreement") and desire to amend the Membership Agreement as stated below;

Client and CCBN.com agree as follows:

1. Under the "Membership Pricing" section of the Membership Agreement, the set-up fee of One Thousand Dollars (\$1,000.00) normally charged by CCBN.com to existing IR Online Clients is waived and no set-up fee will be charged to Client by CCBN.com.
2. Under the second paragraph (Billing Terms and Conditions), sentence six (6), shall be deleted in its entirety and shall have no force or effect.
3. Under the third paragraph (Other Terms and Conditions), the following shall be added at the end of the paragraph:

"CCBN's use of the company's name and logo shall be limited to the uses described herein, and any other use shall be prohibited without the prior written consent of the company. Client agrees to indemnify, and hold harmless CCBN and any of its employees or agents from any third party claim against CCBN arising from CCBN providing client's content, provided, however, that such claim is not the result of CCBN's negligence, willful misconduct, or breach of this Agreement. This agreement (including Addendum I and the Confidential Disclosure Agreement dated January 18, 2001) states the entire understanding of the parties with respect to these services and supercedes any prior representations or negotiations, and may be modified only by a signed writing by the parties."

4. CCBN.com agrees that all writings, drawings, sketches, models, and other creative works prepared by CCBN.com pursuant to the Membership Agreement will be deemed to have been prepared for Client and will be considered as works made for hire and all rights and the copyrights therefor (the "Copyrights") will be owned by Client. All inventions, discoveries, ideas, data and know-how, whether or not patentable, made or conceived or reduced to practice or learned by CCBN.com, either alone or jointly with others, during the performance of services under the Membership Agreement ("Inventions"), will be the sole property of Client and its assigns, and Client and its assigns will be the sole owner of all patents and other rights related to the Inventions. CCBN.com hereby assigns to Client (i) all rights, titles and interests in and to the Copyrights in the United States and elsewhere, including registration and publication rights, rights to create derivative works and all other rights which are incident to copyright ownership, and (ii) any rights it may have or acquire in all Inventions.

5. In order to enable CCBN.com to perform the services under the Membership Agreement, Client will provide CCBN.com with access to its web site and certain other information and materials of Client (the "Client Materials"). CCBN.com agrees to use the Client Materials solely for purposes of performing the services under the Membership Agreement, and to return all Client Materials to Client upon the earlier of Client's request or the termination of the Membership Agreement. All Client Materials will remain the sole and exclusive property of Client. CCBN.com will perform the services under the Membership Agreement in accordance with all applicable laws, rules and regulations.

6. The terms and conditions of the Confidential Disclosure Agreement dated January 18, 2001 between Client and CCBN.com will apply to all confidential information of Client disclosed to, or accessed by, CCBN.com under the Membership Agreement.

7. This Addendum will be attached to and made a part of the Membership Agreement. Except as stated above, the terms and conditions of the Membership Agreement will remain in full force and affect.

CCBN.COM, INC.

By: _____

Name: _____

Title: _____

AMYLIN PHARMACEUTIALS, INC.

By: _____

Lloyd A. Rowland
Vice President and General Counsel

ATTACHMENT A

CONFIDENTIAL

Addendum I To December 18, 2001 Company Boardroom Membership Agreement Between Amylin Pharmaceuticals, Inc. and CCBN.com

THIS ADDENDUM I, effective as of December 18, 2001, is by and between AMYLIN PHARMACEUTICALS, INC., a Delaware corporation ("Client"), with offices at 9373 Towne Centre Drive, Suite 250, San Diego, CA 92121, and CCBN.COM, a Delaware corporation ("CCBN.com"), with offices at 200 Portland Street, Boston, MA 02114.

Client and CCBN.com have entered into a Company Boardroom Membership Agreement dated as of December 18, 2001 (the "Membership Agreement") and desire to amend the Membership Agreement as stated below;

Client and CCBN.com agree as follows:

1. Under the "Membership Pricing" section of the Membership Agreement, the set-up fee of One Thousand Dollars (\$1,000.00) normally charged by CCBN.com to existing IR Online Clients is waived and no set-up fee will be charged to Client by CCBN.com.
2. Under the second paragraph (Billing Terms and Conditions), sentence six (6), shall be deleted in its entirety and shall have no force or effect.
3. Under the third paragraph (Other Terms and Conditions), the following shall be added at the end of the paragraph:

"CCBN's use of the company's name and logo shall be limited to the uses described herein, and any other use shall be prohibited without the prior written consent of the company. Client agrees to indemnify, and hold harmless CCBN and any of its employees or agents from any third party claim against CCBN arising from CCBN providing client's content, provided, however, that such claim is not the result of CCBN's negligence, willful misconduct, or breach of this Agreement. This agreement (including Addendum I and the Confidential Disclosure Agreement dated January 18, 2001) states the entire understanding of the parties with respect to these services and supercedes any prior representations or negotiations, and may be modified only by a signed writing by the parties."

4. CCBN.com agrees that all writings, drawings, sketches, models, and other creative works prepared by CCBN.com pursuant to the Membership Agreement will be deemed to have been prepared for Client and will be considered as works made for hire and all rights and the copyrights therefor (the "Copyrights") will be owned by Client. All inventions, discoveries, ideas, data and know-how, whether or not patentable, made or conceived or reduced to practice or learned by CCBN.com, either alone or jointly with others, during the performance of services under the Membership Agreement ("Inventions"), will be the sole property of Client and its assigns, and Client and its assigns will be the sole owner of all patents and other rights related to the Inventions. CCBN.com hereby assigns to Client (i) all rights, titles and interests in and to the Copyrights in the United States and elsewhere, including registration and publication rights, rights to create derivative works and all other rights which are incident to copyright ownership, and (ii) any rights it may have or acquire in all Inventions.

5. In order to enable CCBN.com to perform the services under the Membership Agreement, Client will provide CCBN.com with access to its web site and certain other information and materials of Client (the "Client Materials"). CCBN.com agrees to use the Client Materials solely for purposes of performing the services under the Membership Agreement, and to return all Client Materials to Client upon the earlier of Client's request or the termination of the Membership Agreement. All Client Materials will remain the sole and exclusive property of Client. CCBN.com will perform the services under the Membership Agreement in accordance with all applicable laws, rules and regulations.

6. The terms and conditions of the Confidential Disclosure Agreement dated January 18, 2001 between Client and CCBN.com will apply to all confidential information of Client disclosed to, or accessed by, CCBN.com under the Membership Agreement.

7. This Addendum will be attached to and made a part of the Membership Agreement. Except as stated above, the terms and conditions of the Membership Agreement will remain in full force and affect.

CCBN.COM, INC.

By: _____

Name: _____

Title: _____

AMYLIN PHARMACEUTIALS, INC.

By: _____

Lloyd A. Rowland

Vice President and General Counsel